

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

1. (Currently Amended) A multi-mode Input/Output (I/O) circuit for transmitting and receiving data between integrated circuits (ICs), wherein each IC contains at least one of said I/O circuits, comprising at least one of transmitter circuitry or receiver circuitry, said transmitter circuitry ~~sending~~ configured to send data to ~~receiver circuitry in~~ another IC, and said receiver circuitry ~~receiving~~ configured to receive data from ~~transmitter circuitry in~~ another IC, said I/O circuit being constructed with CMOS-based transistors that are selectively interconnected together by switches to operate as two single-ended, current or voltage mode links, and as a single differential current or voltage mode link.
2. (Currently Amended) A multi-mode I/O circuit as in claim 1, wherein said transmitter circuitry ~~sends~~ is configured to send data to ~~said~~ receiver circuitry in another IC over a first conductor of a pair of adjacently disposed conductors, and where said receiver circuitry ~~receives~~ is configured to receive data from ~~said~~ transmitter circuitry in ~~said~~ another IC over a second conductor of the pair of adjacently disposed conductors.
3. (Currently Amended) A multi-mode I/O circuit as in claim 1, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating under a condition where a power supply voltage of said transmitter circuitry is equal to a power supply voltage of ~~said~~ receiver circuitry in another IC, for operating under a condition where the power supply voltage of said transmitter circuitry is less than the power supply voltage of ~~said~~ receiver circuitry in another IC, and for operating under a condition where the power supply voltage of said transmitter circuitry is greater than the power supply voltage of ~~said~~ receiver circuitry in another IC.
4. (Currently Amended) A multi-mode I/O circuit as in claim 1, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in one of a plurality of double single-ended, CMOS voltage level link modes, wherein in a first mode a power supply voltage of said transmitter circuitry is equal to a power supply voltage of ~~said~~ receiver circuitry in another IC, wherein in a second mode the power supply voltage of said transmitter circuitry is less than the power

supply voltage of ~~said~~ receiver circuitry in another IC, and wherein in a third mode the power supply voltage of said transmitter circuitry is greater than the power supply voltage of ~~said~~ receiver circuitry in another IC.

5. (Previously Presented) A multi-mode I/O circuit as in claim 1, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in one of said plurality of double single-ended, CMOS voltage level link modes, or in said differential voltage or current mode links, and wherein the ICs at each end of the link may operate with different supply voltages.

6. (Previously Presented) A multi-mode I/O circuit as in claim 1, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in a double single-ended voltage mode link mode.

7. (Previously Presented) A multi-mode I/O circuit as in claim 1, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in a double single-ended current mode link mode.

8. (Previously Presented) A multi-mode I/O circuit as in claim 1, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in a mode defined by a single differential voltage mode link with a single-ended input drive.

9. (Previously Presented) A multi-mode I/O circuit as in claim 1, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in a mode defined by a single differential voltage mode link with a differential input drive.

10. (Previously Presented) A multi-mode I/O circuit as in claim 1, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in a mode defined by a single differential current mode link with a single-ended input drive mode.

11. (Previously Presented) A multi-mode I/O circuit as in claim 1, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in a mode defined by single differential current mode link with a differential input drive.

12. (Original) A multi-mode I/O circuit as in claim 1, wherein certain switches are provided to convert said I/O circuitry into either said transmitter circuitry configuration or into said receiver circuitry configuration.

13. (Currently Amended) A method ~~for transmitting and receiving data between integrated circuits (ICs) that comprise a portable radio communication device~~, comprising:

providing at least two ~~ICs~~ integrated circuits (ICs) to each contain at least one ~~I/O~~ input/output (I/O) circuit, said I/O circuit comprising at least one of transmitter circuitry or receiver circuitry, the transmitter circuitry ~~sending~~ configured to send data to ~~receiver circuitry in~~ another IC, and the receiver circuitry ~~receiving~~ configured to receive data from ~~transmitter circuitry in~~ another IC, the I/O circuit being constructed with CMOS-based transistors; and

selectively interconnecting together the CMOS-based transistors with switches to operate as two single-ended, current or voltage mode links, and as a single differential current or voltage mode link.

14. (Currently Amended) A method as in claim 13, wherein said transmitter circuitry sends data to ~~said~~ receiver circuitry in another IC over a first conductor of a pair of adjacently disposed conductors, and where said receiver circuitry receives data from ~~said~~ transmitter circuitry in said another IC over a second conductor of the pair of adjacently disposed conductors.

15. (Currently Amended) A method as in claim 13, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating under a condition where a power supply voltage of said transmitter circuitry is equal to a power supply voltage of ~~said~~ receiver circuitry in another IC, for operating under a condition where the power supply voltage of said transmitter circuitry is less than

the power supply voltage of ~~said~~ receiver circuitry in another IC, and for operating under a condition where the power supply voltage of said transmitter circuitry is greater than the power supply voltage of ~~said~~ receiver circuitry in another IC

16. (Currently Amended) A method as in claim 13, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in one of a plurality of double single-ended, CMOS voltage level link modes, wherein in a first mode a power supply voltage of said transmitter circuitry is equal to a power supply voltage of ~~said~~ receiver circuitry in another IC, wherein in a second mode the power supply voltage of said transmitter circuitry is less than the power supply voltage of ~~said~~ receiver circuitry in another IC, and wherein in a third mode the power supply voltage of said transmitter circuitry is greater than the power supply voltage of ~~said~~ receiver circuitry in another IC.

17. (Previously Presented) A method as in claim 13, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing the switches for operating in a double single-ended voltage mode link mode.

18. (Previously Presented) A method as in claim 13, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing the switches for operating in a double single-ended current mode link mode.

19. (Previously Presented) A method as in claim 13, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing the switches for operating in a mode defined by a single differential voltage mode link with a single-ended input drive.

20. (Previously Presented) A method as in claim 13, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing the switches for operating in a mode defined by a single differential voltage mode link with a differential input drive.

21. (Previously Presented) A method as in claim 13, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing the switches for

operating in a mode defined by a single differential current mode link with a single-ended input drive mode.

22. (Previously Presented) A method as in claim 13, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing the switches for operating in a mode defined by single differential current mode link with a differential input drive.

23. (Previously Presented) A method as in claim 13, wherein said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing said switches for operating in one of said plurality of double single-ended, CMOS voltage level link modes, or in said differential voltage or current mode links, and wherein the ICs at each end of the link may operate with different supply voltages.

24. (Original) A method as in claim 13, wherein certain switches are provided to convert said I/O circuitry into either said transmitter circuitry configuration or into said receiver circuitry configuration.

25-38. (Canceled)

39. (Currently Amended) A device comprising a plurality of integrated circuits (ICs) and ~~further comprising at least one~~ multi-mode Input/Output (I/O) circuit ~~for transmitting~~ configured to send and receiving receive data between at least two ICs, where each of the at least two ICs contains at least one of said I/O circuits, comprising at least one of transmitter circuitry or receiver circuitry, said transmitter circuitry ~~sending~~ configured to send data to ~~receiver circuitry in~~ another IC, and said receiver circuitry ~~receiving~~ configured to receive data from ~~transmitter circuitry in~~ another IC, said I/O circuit being constructed with CMOS-based transistors that are selectively interconnected together by switches to operate as two single-ended, current or voltage mode links, and as a single differential current or voltage mode link.

40. (Currently Amended) A device as in claim 39, where said transmitter circuitry sends data to ~~said~~ receiver circuitry in another IC over a first conductor of a pair of adjacently disposed conductors, and where said receiver circuitry receives data from ~~said~~ transmitter

circuitry in said another IC over a second conductor of the pair of adjacently disposed conductors.

41. (Currently Amended) A device as in claim 39, where said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating under a condition where a power supply voltage of said transmitter circuitry is equal to a power supply voltage of ~~said~~ receiver circuitry in another IC, for operating under a condition where the power supply voltage of said transmitter circuitry is less than the power supply voltage of ~~said~~ receiver circuitry in another IC, and for operating under a condition where the power supply voltage of said transmitter circuitry is greater than the power supply voltage of ~~said~~ receiver circuitry in another IC.

42. (Currently Amended) A device as in claim 39, where said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in one of a plurality of double single-ended, CMOS voltage level link modes, wherein in a first mode a power supply voltage of said transmitter circuitry is equal to a power supply voltage of ~~said~~ receiver circuitry in another IC, wherein in a second mode the power supply voltage of said transmitter circuitry is less than the power supply voltage of ~~said~~ receiver circuitry in another IC, and wherein in a third mode the power supply voltage of said transmitter circuitry is greater than the power supply voltage of ~~said~~ receiver circuitry in another IC.

43. (Previously Presented) A device as in claim 39, where said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in one of said plurality of double single-ended, CMOS voltage level link modes, or in said differential voltage or current mode links, and wherein the ICs at each end of the link may operate with different supply voltages.

44. (Previously Presented) A device as in claim 39, where said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in a double single-ended voltage mode link mode.

45. (Previously Presented) A device as in claim 39, where said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in a double single-ended current mode link mode.

46. (Previously Presented) A device as in claim 39, where said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in a mode defined by a single differential voltage mode link with a single-ended input drive.

47. (Previously Presented) A device as in claim 39, where said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in a mode defined by a single differential voltage mode link with a differential input drive.

48. (Previously Presented) A device as in claim 39, where said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in a mode defined by a single differential current mode link with a single-ended input drive mode.

49. (Previously Presented) A device as in claim 39, where said transmitter circuitry and said receiver circuitry are selectively configured by opening or closing switches for operating in a mode defined by single differential current mode link with a differential input drive.

50. (Previously Presented) A device as in claim 39, where certain switches are provided to convert said I/O circuitry into either said transmitter circuitry configuration or into said receiver circuitry configuration.

51. (Previously Presented) A device as in claim 39, where at least one of said plurality of ICs comprises a radio frequency IC, and where at least one other one of said ICs comprises a baseband IC.

52. (New) The circuit according to claim 1, where in the single differential current mode a current drawn from said at least one of transmitter circuitry or receiver circuitry is constant.

53. (New) The method according to claim 13, where in the single differential current mode a current drawn from said at least one of transmitter circuitry or receiver circuitry is constant.

54. (New) The device according to claim 39, where in the single differential current mode a current drawn from said at least one of transmitter circuitry or receiver circuitry is constant.